CLAIMS:

1. An encoding device for encoding a signal, the signal representing a program of a predefined duration, and the encoding device comprising a compression unit (22) for compressing the signal to digital data, and a system controller (25) for controlling the compression unit (22) for influencing the bit rate of the digital data for fitting the program in a data space which is available for the program in dependence on a remaining part of the data space and a remaining part of the duration established during encoding, characterized in that the system controller (25) is arranged for setting the compression unit in dependence on a program complexity of the actual program.

2. The encoding device as claimed in Claim 1, characterized in that the system controller (25) is arranged for establishing the program complexity in dependence on an actual bit rate during a previously encoded part of the program.

3. The encoding device as claimed in Claim 2, characterized in that the system controller (25) is arranged for establishing the program complexity in dependence on peaks and valleys or variation of the actual bit rate during a previously encoded part of the program.

4. The encoding device as claimed in Claim 1, 2 or 3, characterized in that the system controller (25) is arranged for establishing the program complexity in dependence on a program type.

5. The encoding device as claimed in Claim 1, 2, 3 or 4, characterized in that the system controller (25) is arranged for determining the duration in dependence on an expected duration of the program and a margin for levelling off peaks in the bit rate in a last part of the program and/or for the program overrunning its time.

6. A recording device for recording a signal on an information carrier (1), the signal representing a program of a predefined duration, the information carrier having a vacant data space available for recording the program, and the device comprising recording means (41, 42) for recording a digital bit stream on the information carrier and means (45) for establishing the predefined duration, characterized in that the recording device comprises an encoding device as claimed in Claim 1, 2, 3, 4 or 5.

7. A method of encoding a signal that represents a program of a predefined

duration, the signal being converted by a compression process into digital data with a bit rate influenced for fitting the program in a vacant data space which is available for the program, in which method a remaining part of the vacant memory space and a remaining part of the duration are determined during the encoding process and the bit rate is influenced by settings of the compression process in dependence on the remaining part of the vacant data space and the remaining part of the duration, characterized in that the compression process is set in dependence on a program complexity of the actual program.

8. The method as claimed in Claim 7, characterized in that the program complexity is established in dependence on an actual bit rate during a previously encoded part of the program.

9. The method as claimed in Claim 7 or 8, characterized in that the program complexity is established in dependence on peaks and valleys or variation of the actual bit rate during a previously encoded part of the program.

10. The method as claimed in Claim 7, 8 or 9, characterized in that the program complexity is established in dependence on a program type.

11. The method as claimed in Claim 7, 8, 9 or 10, characterized in that the duration is determined in dependence on an expected duration of the program and a margin for levelling off peaks in the bit rate in a last part of the program and/or for the program overrunning its time.

12. An encoded signal obtained by implementing the method as claimed in Claim 7, 8, 9, 10 or 11.